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SPECIAL ARTICLES.

THE MILITARY SURGEON AS A SPECIALIST.[1] [2]

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In these days of intensive specialization it is to be expected that medical officers of the Army and Navy should seek to obtain greater proficiency in chosen branches of their profession. How far this specialization should go is open to discussion.

The Medical Departments of the Army and Navy recognize the need of further instruction of graduates from civilian medical schools before they can satisfactorily perform their duties as military surgeons. The difference in requirements of duty is reflected in the curricula of the Army and Naval Medical Schools. Brig. Gen. Walter D. McCaw, commandant of the Army Medical School, Washington, D. C., states in a letter of July 17, 1922:

"Under our present scheme of instruction all students, both medical and dental, first take a four months' course at Carlisle and afterwards come to the Army Medical School and the Army Dental School here in Washington. During the session just closed there were 50 medical officers and 14 dental officers who had passed Carlisle undergoing instructions here in Washington.

"As to specialization, we teach certain specialties, as you may see, in the school for two reasons: First, because in certain things, such as diseases of the eye, ear, nose, and throat, roentgenology, and in laboratory work all medical officers are supposed to have a certain amount of training; second, from the classes we very readily pick out certain men who show unusual promise in some particular specialty, and these men are usually selected to go to the general hospitals or the Army laboratories to continue their work."

[1] Paper read before the Association of Military Surgeons of the United States, Washington, D. C., October 12, 1922.

[2] Reprinted from The Military Surgeon.

In the Medico Military Review of May 15, 1921, the course at Carlisle is outlined as follows:

"At the Medical Field Service School, Carlisle Barracks, Pa., instruction pertains essentially to the development of the military part of an officer's education, special emphasis being given to tactical (field) training.

"At present the maximum accommodations provide for 90 student officers at one time. Facilities for expansion exist, and in the future the capacity will be increased as funds for this purpose become available.

"As this is a tactical school, and the Medical Department consists of officers of the Medical, Dental, Veterinary, and Medical Administrative Corps, courses are arranged for the combined training of all these officers. On the contrary, it is contemplated that only medical officers will be given technical medical training at the Army Medical School, although until other facilities are provided for them the veterinary and dental officers will be considered eligible for laboratory and other courses to be conducted at that school. Eventually the Medical Department will maintain a technical school for each of its major services, such as an Army dental school, an Army veterinary school, and an Army nurse school, in addition to the Army Medical School.

"The long or standard basic course is primarily conducted to meet the needs of all candidates for admission to the Medical, Dental, and Veterinary Corps of the Regular Army. The instruction is progressive and extends from the school of the soldier to the organization, functions, and administration of Medical Department units attached to the field forces or in home territory, in peace or in war, such as regimental detachments, medical regiments, evacuation hospitals, surgical hospitals, hospital trains, general hospitals, station hospitals, etc. The course is also designed to prepare the inexperienced officer for the discharge of his military duties upon entering the service, irrespective of whether his assignment be with mobile or fixed formations. The course constitutes his induction into military life and is a prerequisite to admission to the professional (technical) school of his special corps. When the needs of the Regular Army have been met the remaining accommodations each year will be made available for medical officers of the National Guard or Reserve Corps who can spare the time to take this full course.

"At the Army Medical School, Washington, D. C., instruction pertains essentially to the development of the professional part of an officer's education, special emphasis being paid to technical (medical) training.

"At present the maximum accommodations provide for 75 student officers at one time.

"The standard basic course in technical subjects is primarily conducted for medical officers of the Regular Army who have entered the service as commissioned officers since the beginning of the preceding course and who have satisfactorily completed the basic course at the Medical Field Service School at Carlisle Barracks, Pa., and for selected officers of the National Guard and Reserve Corps. It has as its object postgraduate study of the following subjects in their application to military conditions: Bacteriology, parasitology, and preventive medicine; sanitary chemistry, nutritional chemistry, clinical and operative surgery, clinical medicine, opthalmology, and roentgenology. (All clinical work is given at Walter Reed General Hospital, Takoma Park, D. C.

"The special advanced (postgraduate) courses are maintained for selected medical officers who desire to undertake postgraduate work, or make an intensive study of any professional specialty, including any of those subjects mentioned above. Students for the advanced courses will be selected for their special fitness for the particular subject or subjects they are to pursue. As these courses will be highly specialized, and as they will require a student's full time, each officer will, as a rule, be detailed to take but one of them during a given session."

The Naval Medical School, Washington, D. C., runs two classes a year of four and a half months duration each. Capt. C. S. Butler, Medical Corps, United States Navy, in command, states in a letter of 19 July, 1922:

"It has been found during the 20 years of the school's existence that this length of course serves the bureau's purpose best and holds the student's attention with a minimum of lag. We have a laboratory capacity of 30 students. It is not practicable, however, for the bureau to order this number to each course. We had 27 in the fall class (1921), and 14 in last spring's class.

"As to the needs of recent graduates, the course as shown in the roster meets these needs fairly well. It is the Surgeon General's wish that the course be made as sensitive to anything that is new and of value as possible, and we try to discard any item of instruction which does not pay its way. The Surgeon General has also instituted the policy of giving the recent entrants the course here, and the older men who have seen service any postgraduate work at civilian institutions which their service performance or peculiar bent may merit. This is making for better satisfaction and, in my opinion, is a constructive way of educating service medical officers.

"We are establishing a school for dental officers and aviation surgeons, and will have these in operation in conjunction with

this school by 1 January, 1923. The special courses are also given to hospital corpsmen and to female nurses at various places.

"We are making plans to increase the instruction in gas warfare and cardio-vascular diseases (including electrocardiography) and to give the class instruction in physiotherapy. A medical officer is now taking special work in this subject with a view to acting as the bureau's adviser and school instructor in it."

After graduation from the Government medical school the young doctor has become, to a certain extent, a specialist—a military surgeon. With considerable proficiency in his profession from experience as interne in a civilian hospital, the young officer's career is about to begin. Those of us who have spent years in the service realize the value of experience from varied duties. Not only must the military surgeon keep abreast of the times in medical subjects, but the advancement of methods of modern warfare and military organization demand constant attention. The naval medical officer must understand the details of ship sanitation, and he should be informed as to methods of field sanitation, in case of service with landing parties or duty with the marines. The development of the submarine, airplane, and gas warfare has presented new problems which naval medical officers must solve.

It will require several years of application and experience before the Army surgeon can handle the problems presented in the evacuation of wounded over complicated terrain. Modern methods of warfare have obliged Army medical officers to extend their knowledge of poisonous gases, aviation, and handling of field casualties. In both services the professional duties of medical officer of the day at hospitals and stations are much alike, though the military duty may be different because of the organization. Knowledge of clerical work and the preparation of necessary forms are important. Only experience by varied duties will train a medical officer to handle many problems which arise.

As for the purely professional requirements, the rapid advances in all branches of medicine and surgery require constant study. Then there are special subjects which a military surgeon must keep in touch with, such as tropical diseases, sanitation, and military surgery. The requirements of duty may demand a considerable knowledge of obstetrics and pediatrics, after years of inability to use such previous training. Or else the military surgeon may be at an isolated post or on a ship where no eye and ear specialist is available, and he must rely on his own skill and knowledge. He may be situated where opportunity is given to study new diseases, and knowledge of laboratory methods will prove invaluable. Ability to operate is always a requirement of a military surgeon.

It would appear, then, from this brief outline that to be an able and well-qualified military surgeon requires one's best efforts of study and considerable experience and training. Are we perhaps wrong in trying to make him a "jack-of-all-trades and master of none"? Are the advantages of concentration on any one subject, as is done by civilian specialists, worth while to the military surgeon?

Brigadier General McCaw states:

"We know it to be highly necessary to have a certain number of qualified specialists in the service, and so far we have succeeded in producing such in numbers sufficient for our needs."

Captain Butler of the Naval Medical School says:

"As regards specialization, the Medical Corps *must* have officers whose opinions are sound in many different specialties, e. g., X ray, cardiovascular diseases or surgery, laboratory (chemical, serological, pathological) hygiene and sanitation. Broadly, these specialties set themselves off into those of internal medicine, surgery, and sanitation. Now, it is not incompatible with the ability to do the general work of the naval medical officer if he specializes in internal medicine, or if he is the best operating surgeon in the Navy, or if his conception of the problems of hygiene is the best obtainable. In fact, if he knows his special work thoroughly and practically, he must know a good deal of medicine, surgery, and sanitation in general. It is in this sense that the Navy must have specialists, but as for having these committed to a specialty in the more restricted sense of the civil practitioner, I do *not* think it is desirable."

What are the advantages and disadvantages of intensive specialization for the military surgeon? The value of having men highly skilled in a specialty is clearly seen in civilian life, and it would appear logical to assume the same would be true for the Government service. When we remember, however, the demands of duty for the military surgeon, requiring courses in various specialties after entry into the service, it is apparent that civilian and military practice are not entirely comparable. Every civilian community of any size maintains its specialists to whom cases can be referred. The medical officer is, however, frequently alone on a ship which may not be near a hospital ship or port where a specialist is available. Or he may be stationed at a small isolated post or detachment. To insure a reasonable degree of skilled care at all times for the officers and men of the Army and Navy, it is necessary to have a large majority of the Medical Corps trained to meet any emergency.

During recent years there has been a tendency for higher specialization, especially among the younger men, before they have attained proficiency as military surgeons. Concentrating on their specialty, they do not feel it incumbent to keep up in the other professional and military branches. In fact, if called upon to do

the general duties of a medical officer, they feel that they should be excused. Then again, the effect of having specialists is to encourage other members of the corps to believe that it is not necessary for them to keep up in these subjects, hence there is a danger of lowering the general efficiency. If the surgery at our military hospitals is always done by men who have specialized, the larger majority of the corps will soon be "gun shy" when called upon to operate. Doctor Rixey, when Surgeon General, recognized this and demanded that all the young surgeons at naval hospitals operate. The laboratory expert or internist may find it difficult to keep up his interest in surgery, or the eye, ear, nose, and throat specialist is kept so busy with his specialty that there is no time to give to internal medicine or laboratory work. Recently we have seen medical officers concentrating on the problems of aviation, gas warfare, public health, and industrial welfare, and special sanitation of submarines. Others have found administrative duties, obstetrics, pediatrics, dermatology, and field service with the marines of special interest.

Shall we permit such specializing to continue? What is the best and most reasonable solution of the problem? How shall we meet the danger of losing young men, trained at the Government expense as specialists and then resigning to go into the more lucrative field of civil life? What is the effect on the general morale of the corps if the specialist can not be sent to do the routine duties of a medical officer when his turn for sea occurs? How can a selection board conscientiously choose specialists for promotion to the ranks which require executive and administrative ability acquired by long experience in the varied duties of the service?

Commander H. W. Smith, Medical Corps, United States Navy, attached to the Bureau of Medicine and Surgery, has given this subject considerable study, and permits me to quote from an article in the NAVAL MEDICAL BULLETIN, as follows:

"Closely as the practice of medicine in the service may parallel that in civil communities, so-called, military necessities often compel wide departures from the model. An instance in point is furnished by the limits set on specialism in the Navy. There it must always be an anomolous specialism in which the particular is not pursued to the exclusion of the general. Therefore, the bureau, desirous as it is of fostering the spirit of research and the precision of specialism, nevertheless will be governed in framing its educational program and in making assignments to duty by the principle that specialism with us can not be followed exclusively. The acquisition of a specialist's information in one field is altogether admirable, but it must always be superposed on a working knowledge of *all* duties which a naval medical officer may be called upon to perform. *Specialization can not be allowed to unfit a medical officer for general duty nor to exempt him from it.*

"Rarely, and then only under special circumstances, will officers just graduated from the Naval Medical School be launched forthwith on a career of specialism. Instead, those officers who have been in the service for a period of several years will, at the expiration of a cruise, be given instruction in the subject they have chosen, and subsequently will be ordered to duty where they may practice it as a specialty. Similarly, men who have served longer and who have had opportunity to manifest aptitude, will be given instruction of a more advanced character; for example, a man who is known to be an able general surgeon may elect a course of study in the surgery of the brain. From among men who have been able to follow this progression will be drawn chiefs of service, professional executives, and coordinators.

"The bureau does not feel compelled to extend active aid to all officers equally, believing that it should grant unusual opportunities for development only to those who have expressly signified their intention to remain in the service and who have already been in the service sufficiently long to have demonstrated their initiative, ability, and industry. Conversely, medical officers need not fear that the display of these qualities will fail of reward, for nowhere as in a military service are ability and accomplishment so sure of gaining recognition. In making its selection of officers for training and appropriate duty afterwards, the bureau will have as guides its knowledge of officers and such information as may be obtained from records, reports of fitness, and the (new) personnel sheet of the inspection report. Further, it will be of assistance if individuals desiring training will see that their applications are on file, and those possessing special experience will make that fact known to the bureau.

"The specialties referred to in the preceding paragraphs are those intimately connected with the practice of medicine. Besides these, there are other subjects that are undeniably of greater importance in the naval service, such as aviation medicine, field service with the marines, chemical warfare, public health, and industrial medicine—subjects that carry a strong appeal to those who by temperament, inclination, or lack of opportunity fail to follow the lines of professional development laid down. Some of these subjects, in the present state of medicine, are commonly regarded as collateral specialties or of minor importance, and for this reason many officers exhibit hesitation in identifying themselves with them, alleging that they do not pertain directly to the career of a naval surgeon and that their pursuit may in the long run prove unprofitable. The bureau dissents strongly from this view, regarding the attitude taken as

not founded on a just estimate of the relative values and as unfortunate in its effects on the mission of the Medical Corps."

Commander P. S. Rossiter, Medical Corps, United States Navy, attached to the Bureau of Medicine and Surgery, whose duty as detail officer permits him to have intimate knowledge of the value of specialists to the corps, in a letter dated 27 July, 1922, states as follows:

"I find no difficulty in placing these men where their services will be of value, and where their specialty will either be fully utilized or at least kept alive.

"Some of these men we can place on hospital ships; some with the expeditionary forces; some on flagships where their services will be available either to the fleet, division, or force; some can only be placed where they will be able to carry on their specialty on their own ship, but, even so, if their interest is sufficiently great, they can keep the spark alive.

"Undoubtedly, it is of great value to the service to have men well developed along certain special lines, but I feel equally sure that it would be most detrimental to the efficiency of the corps should they give entire attention to these specialties, as we must have men who can go to sea as 'medical officers,' and to establish a group of shore-going or fancy-job men would be destructive of morale, as it would tend to create a seagoing and shore division of the corps, for which reason I believe most emphatically that they should not give their entire attention to their specialties but must keep up with the other subjects required of a naval medical officer."

Although there are some senior medical officers of the Navy who are in favor of intensive specialization, it is evident that those who are in a position to judge the relative value of general versus special training are in accord as to limitation of specialization in the Navy. *From a practical standpoint the Bureau of Medicine and Surgery's present policy, as expressed in Commander Smith's article, would seem to solve the problem.* For the greater efficiency of the corps it is undoubtedly wise to concentrate on the training of medical officers for general duties as military surgeons, competent to be sent to any of the varied duties the service demands. If a young medical officer elects to devote special attention to any one branch, it should not be at the expense of the other branches.

It is well to remember that Admiral Rixey, when Surgeon General, developed a corps of operating surgeons by requiring all the younger medical officers to operate under the supervision of the senior surgeons. Although some showed greater skill and aptitude than others, the majority were prepared to handle any emergency operation and the routine surgery which occurs in the Navy. In a similar manner, by change of service at naval hospitals, assistants

can be trained in the general duties of medical officers, by working under the supervision of older men in charge of the surgical and medical service, laboratory, X-ray, eye, ear, nose and throat, etc. After a reasonable period of varied service, say 10 years, which should include at least one tour of hospital service, medical officers might be permitted to take courses to develop a chosen specialty. By this time there will be a background of experience in general practice, which should be required not only for military but for civilian specialists, if their opinions are to be sound and not biased by their specialty. The Bureau of Medicine and Surgery, by means of efficiency and other reports, is able to know which medical officers have attained proficiency in various specialties. In assigning duty this would be kept in mind and the work of the Medical Department as a whole conducted more efficiently.

In view of the difference of opinion among medical officers as to the need of specialists in the service, it is believed that a discussion of the subject is timely and will help to clarify the situation. Let us not forget, however, that well-trained military surgeons are in reality a corps of specialists requiring their best efforts to keep qualified for the many duties they may be called upon to perform. When we further specialize the military specialist it should be with a clear understanding of how to guard against the dangers of over-specialization.

THE EQUIPMENT OF TRANSPORTS DURING THE WORLD WAR.

By J. J. Snyder, Commander, Medical Corps, United States Navy (late Force Medical Officer, Cruiser and Transport Force).

PROLOGUE.

The transportation of men at sea has always been a problem of magnitude, but never until the World War was it rendered so hazardous, as the submarine was an unknown quantity in any previous war in which troops had to make a sea voyage to reach the scene of their activities. The subject has interested me since my entry into the service, but I never was able to get in touch with much literature bearing on it. Campaigns are described in detail, but not the method of fitting out the troopships which carried the soldiers to the seat of war.

Many of the problems which vexed the medical officers fitting out troopships during the World War must have arisen in the past, but if they complained, or put their troubles on record, they must be hidden in long-forgotten files. The doctor, I am certain, has always been a not unimportant member of expeditions, warlike or exploratory, and I like to think of Aesculapius, the "Father of Medicine," not as he is depicted, as a decrepit old man far more in need